



Projections of the effects of climate change on allergic asthma: The contribution of aerobiology

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Abstract:

Climate change is unequivocal and represents a possible threat for patients affected by allergic conditions. It has already had an impact on living organisms, including plants and fungi with current scenarios projecting further effects by the end of the century. Over the last three decades, studies have shown changes in production, dispersion and allergen content of pollen and spores, which may be region- and species-specific. In addition, these changes may have been influenced by urban air pollutants interacting directly with pollen. Data suggest an increasing effect of aeroallergens on allergic patients over this period, which may also imply a greater likelihood of the development of an allergic respiratory disease in sensitized subjects and exacerbation of symptomatic patients. There are a number of limitations that make predictions uncertain, and further and specifically designed studies are needed to clarify current effects and future scenarios. We recommend: More stress on pollen/spore exposure in the diagnosis and treatment guidelines of respiratory and allergic diseases; collection of aerobiological data in a structured way at the European level; creation, promotion and support of multidisciplinary research teams in this area; lobbying the European Union and other funders to finance this research.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Ecosystem Changes, Meteorological Factors, Precipitation, Temperature

Air Pollution: Allergens, Interaction with Temperature, Ozone, Other Air Pollution

Air Pollution (other): NO2

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

Climate Change and Human Health Literature Portal



resource focuses on specific location

Non-United States

Non-United States: Europe


Health Impact: 

specification of health effect or disease related to climate change exposure

Respiratory Effect

Respiratory Effect: Asthma, Upper Respiratory Allergy

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type: 

format or standard characteristic of resource

Review

Timescale: 

time period studied

Time Scale Unspecified